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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/771,796 | 01/29/2001 | Jacob N. Wohlstadter | 100405-02250 | 7838 |

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EXAMINER

CHEU, CHANGHWA J

ART UNIT PAPER NUMBER

1641

DATE MAILED: 12/17/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/771,796

Applicant(s)

WOHLSTADTER ET AL.

Examiner

Jacob Cheu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 110-126 is/are pending in the application.
- 4a) Of the above claim(s) 75-109 and 127-134 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 110-126 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group III, claims 110-120, 124-126 in Paper No. 8 is acknowledged.
2. Applicant argues that group II, claims 121-123, should be joined with group III for examination because claim 121-123 depend on claim 120. Examiner agrees with the reasoning and thus join group II and III for examination.

Applicant argues that group I, IV and V should join group III for examination since no undue burden would impose on the examiner. Applicant's argument has been considered but appears not persuasive. Each restricted group in this instant application does constitute patentably distinct invention, thus a different class, subclass and a separate status in the art are required for search purposes. Currently, claims 110-126 are under examination. Non-elected claims 75-109 and 127-134 are withdrawn from further consideration.

The requirement is still deemed proper and is therefore made ***FINAL***.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 115-116 and 125-126 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 115, "a composite material" is vague and indefinite. Applicant needs to clarify what is the "composite material."

With respect to claim 116, line 2, "a polymeric material" is vague and indefinite. It is unclear what is the "polymeric material" in the language.

With respect to claim 125, "said working electrodes" lacks antecedent basis.

With respect to claim 126, "said binding domains" lacks antecedent basis.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 110-116, 118-121, 124-126 are rejected under 35 U.S.C. 102(a) as being anticipated by Briggs et al. (US 5560811).

Briggs et al. teach an apparatus for DNA analysis. The apparatus comprises placing samples in multi well plates where an array of electrodes are connected to the bottom of each well. (See Figure 4A and 4B) The apparatus taught by Briggs et al. also include light detector, electrodes made of carbon fiber with coated epoxy composite material, and electrically connected to each component. (See Figure 11; Col. 8, line 60-67) Furthermore, Briggs et al. teach using fluorescent labels for use of detecting DNA synthesis. (Col. 14, line 15-20)

7. Claims 110-111, 113-116, 118-120 are rejected under 35 U.S.C. 102(a) as being anticipated by Purvis (US 6033850).

Purvis teaches a device for DNA analysis, and the device comprises a plurality of wells where the wells forming an array of electrodes which dip into the plurality of wells for DNA denaturation process. (See claim 23) Purvis teaches use of glassy carbon with a polymeric teflon on the electrode for denaturation of DNA in a sample. (Col. 1, line 55-58) Although Purvis does not explicitly teach electrical contacts connected to the

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electrodes, it is an inherent character that electrode in the art would have electrical contacts to the sample wells for detection.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 122-123 are rejected under 35 U.S.C. 103(a) as being unpatentable over Briggs et al. in view of Siddigi et al. (US 5541113).

Briggs et al. reference has been discussed but does not explicitly teach using metal-containing organic compounds for electrochemiluminescent labels. Siddigi et al. teach a electrochemiluminescent method for detecting an analyte in an aqueous solution by using organometallic complexes, including ruthenium, osmium, rhodium for the benefits of maintaining thermal, chemical and photochemical stability, high and long emission lifetimes. (Col. 2, line 27-36) Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided Briggs et al. with the

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chemiluminescence methodologies as taught by Siddigi et al. because the organometallic compounds are well-known in the art for maintaining thermal, chemical stability as well as achieving high and long emission lifetimes.

Conclusion

11. No claim is allowed.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Cheu whose telephone number is 703-306-4086. The examiner can normally be reached on 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 703-305-3399. The fax phone number for the organization where this application or proceeding is assigned is 703-746-9434.

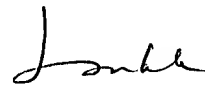
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3399.

Jacob Cheu

Examiner

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December 2, 2003


LONG V. LE
SUPERVISOR EXAMINER
TECHNOLOGY CENTER 1600

12/15/03